Listing of the Claims

1. (original) A method for allocation of protection paths after a failure in an optical network, the method comprising:

responsive to a failure in an active lightpath, switching traffic on the active lightpath to a protection path;

subsequent to the switching, identifying all active lightpaths in the network that no longer have an available protection path; and

attempting to allocate a protection path to each of the identified active lightpaths.

2. (original) The method of claim 1 further comprising, responsive to the switching, releasing resources associated with the active lightpath.

3. (original) The method of claim 1 wherein the attempting begins immediately after the identifying and is performed each time an active lightpath is released in the network.

4. (original) The method of claim 1 wherein the failure comprises a node failure.

5. (original) The method of claim 1 wherein the failure comprises a link failure.

6. (original) The method of claim 1 wherein the failure affects more than one active link.

7. (original) The method of claim 6 wherein the switching is performed for each of the affected active links individually.

8. (original) The method of claim 1 further comprising:

identifying all protection paths affected by the failure; and

releasing resources of all of the identified protection paths.

9. (original) A method of allocating protection paths in an optical network, the method comprising:

responsive to a failure in the network, for each active lightpath affected by the failure, switching traffic from the affected active lightpath to a protection path thereof;

subsequent to the switching, classifying as orphans all active lightpaths in the network that no longer have an available protection path as a result of the failure; and

attempting to allocate a protection path to each of the orphans each time an active lightpath is released in the network.

10. (original) The method of claim 9 wherein the attempting is performed until a protection path is allocated to all of the orphans.

11. (original) The method of claim 9 further comprising, responsive to the switching, releasing resources associated with the affected active lightpaths.

12. (original) The method of claim 9 wherein the failure comprises failure of a node.

13. (original) The method of claim 9 wherein the failure comprises failure of a link.

14. (original) The method of claim 9 further comprising:

identifying all protection paths affected by the failure; and

releasing resources of all of the identified protection paths.

15. (original) A system for allocating protection paths after a failure in an optical network, the system comprising:

means responsive to a failure in an active lightpath for switching traffic on the active lightpath to a protection path;

means for identifying all active lightpaths in the network that no longer have an available protection path subsequent to the switching; and

means for attempting to allocate a protection path to each of the identified active lightpaths each time an active lightpath is released in the network.

16. (original) The system of claim 15 further comprising means responsive to the switching for releasing resources associated with the active lightpath.

17. (original) The system of claim 15 wherein the failure comprises a failure in a node of the network.

18. (original) The system of claim ~~14~~ 15 wherein the failure comprises a failure in a link of the network.

19. (original) The system of claim ~~14~~ 15 wherein the failure affects more than one active link.

20. (original) The system of claim 19 wherein the switching is performed for each of the affected active links individually.

21. (original) The system of claim 15 further comprising:

means for identifying all protection paths affected by the failure; and

means for releasing resources of all of the identified protection paths.